

WHAT IS CLAIMED IS:

1. A motor for use with a motorized power steering apparatus in which said motor is fixedly secured to a housing having a gear accommodated therein for transmitting a torque of said motor to a steering wheel, said motor comprising:

a frame of a bottomed cylindrical shape having an opening formed therein; a bracket fixed to said opening in said frame;

a rotating element extending through said bracket and having a shaft rotatably supported by a frame side bearing fixedly mounted on said frame and a bracket side bearing fixedly mounted on said bracket;

a stationary element fixedly attached to said frame at a location around an outer periphery of said rotating element and having a stator winding wound therearound;

a rotation sensor provided on said bracket at one side of said bracket side bearing near said housing for detecting a rotational angle of said rotating element; and

a plurality of sensor signal wires connected with said rotation sensor for supplying and receiving signals to and from said rotation sensor.

2. The motor according to claim 1, wherein said rotation sensor comprises a stator fixedly secured to said bracket and a rotor fixedly secured to said shaft, wherein a change in the magnetic field of said stator caused in accordance with rotation of said rotor is detected for sensing the rotational angle of said rotating element.

3. The motor according to claim 2, further comprising a wire connection board provided at one side of said stationary element near said bracket side bearing, said wire connection board being connected with said stator winding and having annular stator side respective phase terminals arranged

concentrically around said shaft of said rotating element in a radially spaced apart relation with respect to one another.

4. The motor according to claim 3, further comprising a connection plate provided on said bracket, said connection plate having a base and lead wire side respective terminals fixedly secured to said base, said lead wire side respective terminals being connected with connection portions, which extend in an axial direction from said stator side respective phase terminals, and with respective phase lead wires, which serve to supply current to said stator winding.

5. The motor according to claim 4, wherein said base is formed with insertion openings each in the shape of a tapered configuration expanding toward an open end thereof, and said connection portions have their ends inserted into said corresponding insertion openings, respectively.

6. The motor according to claim 1, wherein said plurality of sensor signal wires are bundled together to form a multi-wire cable.

7. The motor according to claim 6, wherein said respective sensor signal wires are combined with one another by a sealing material and covered on their outer periphery with a waterproof heat shrinkable tube at one end of said multi-wire cable which is connected with a connector.

8. The motor according to claim 7, wherein said respective sensor signal wires at their ends connected with said connector are arranged substantially in a row.

9. The motor according to claim 6, wherein said multi-wire cable passes over a fastening member which fastens said connection plate to said

bracket.

10. The motor according to claim 6, wherein said multi-wire cable is clamped between a plurality of protrusions formed on said bracket so as to be positioned in place.

11. The motor according to claim 1, wherein said respective phase lead wires and said multi-wire cable extend through a single grommet.